REMARKS

Applicant appreciates the thorough examination of the present application that is reflected in the Official Action of November 2, 2001. In response, the independent and dependent claims have been amended to clarify that the pending claims provide multiple DC output voltage DC/DC converters. In particular, independent Claim 10 has been amended to recite:

> A multiple DC output voltage DC/DC converter comprising:...
> wherein a first DC output voltage is generated from the primary coil and a second DC output voltage is generated from the secondary coil. (Emphasis added.)

Remaining independent Claim 14 also has been amended to recite:

> A multiple DC output voltage DC/DC converter comprising:...
> wherein a first DC output voltage is generated from the inductor and a second DC output voltage is generated from the secondary coil. (Emphasis added.)

The dependent claims also have been amended to provide antecedent basis for the first and second DC output voltages.

All of pending Claims 10-16 were rejected under 35 USC §102(b) as being anticipated by U.S. Patent 5,325,283 to Farrington et al. and, in particular, Figure 2 and the corresponding description thereof. However, as clearly shown in Farrington et al. Figure 2, the Farrington et al. switching converter provides a single output voltage across the load $\mathbf{R_L}$. The single output voltage is denoted **V0** in corresponding prior art Figure 1 of Farrington et al..

In sharp contrast, embodiments of the claimed invention, as reflected, for example, in Figures 6 and 7 of the present application, can provide multiple output voltages **Von**, **Voff** and **VDD** from a single input voltage **Vin**. In these embodiments, the DC output voltage **VDD** is generated from the primary winding of a transformer, whereas the DC output voltages **Von** and **Voff** are generated from the secondary coil of the transformer.

Independent Claims 10 and 14 have been amended to recite a multiple DC output voltage DC/DC converter, wherein a first DC output voltage is generated from a primary coil of a transformer (e.g., directly or via an inductor that is coupled to the primary coil) and a second DC output voltage is generated from a second coil of the transformer. Embodiments of Figures 6 and 7 can provide various advantages as described, for example, at Page 5, line 15-Page 6, line 2 of the present application:

> In accordance with the present invention, the main supply voltage uses the constant voltage obtained from the primary coil of the transformer, the auxiliary

supply voltage uses at least the two more constant voltages from the secondary coils of the transformer, and accordingly, the multiple output voltages are supplied to the LCD.

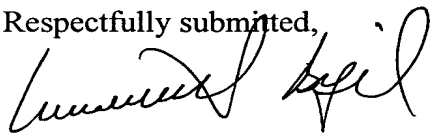
Further, the multiple output DC/DC voltage converter in accordance with the present invention generates the main supply voltage with high efficiency directly obtained form the primary coil, and, together with the auxiliary supply voltages obtained from the secondary coils, the main supply voltage with the high efficiency is supplied. That is, the DC/DC voltage converter provides the multiple output voltages and the main supply voltage with the high efficiency simultaneously.

For at least these reasons, independent Claims 10 and 14 are patentable over Farrington et al.

Dependent Claims 11-13 and 15-16 are patentable as depending from a patentable independent claim. Moreover, Claim 11 recites that the primary coil is connected between an input voltage and a switch, and a first rectifier is connected to the primary coil to generate the first DC output voltage therefrom. Claim 15 recites that the inductor is connected between an input voltage and a switch, and a first rectifier is connected to the inductor to generate the first DC output voltage therefrom. Since Farrington et al. does not recite generation of the first DC output voltage at all, it also does not describe or suggest these connections using the first rectifier, the primary coil and/or the inductor, as recited in Claims 11 and 15. Accordingly, Claims 11 and 15 are independently patentable.

In view of the above, Applicant respectfully requests withdrawal of the outstanding rejections and allowance of the present application.

Respectfully submitted,



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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Commissioner for Patents, Washington, DC 20231, on January 31, 2002.

Susan E. Freedman

Susan E. Freedman
Date of Signature: January 31, 2002

VERSION WITH MARKINGS TO SHOW CHANGES MADE

The following is an addendum to the concurrently filed Amendment in response to the Official Action dated November 2, 2001 in the above-referenced application. This addendum includes a marked-up version of the changes made to the claims by the present Amendment.

In the Claims:

Claims 10-11 and 13-15 have been amended as follows:

10. (Amended) A multiple DC output voltage DC/DC converter comprising:

a transformer including a primary coil and a secondary coil that are coupled to one another by magnetic induction; and

a switch that is connected to the primary coil and that controls current switching therein;

wherein a first DC output voltage is generated from the primary coil and a second DC output voltage is generated from the secondary coil.

11. (Amended) A converter according to Claim 10 further comprising a first rectifier and a second rectifier, wherein the primary coil is connected between an input voltage and the switch, wherein the first rectifier is connected to the primary coil to generate the first DC output voltage therefrom and wherein the second rectifier is connected to the secondary coil to generate the second DC output voltage therefrom.

13. (Amended) A converter according to Claim 10 further comprising an inductor that is coupled across the primary coil, wherein the first DC output voltage is generated from the primary coil and from the inductor.

14. (Amended) A multiple DC output voltage DC/DC converter comprising:

a transformer including a primary coil and a secondary coil that are coupled to one another by magnetic induction;

an inductor that is coupled across the primary coil; and

a switch that is connected to the inductor and that controls current switching therein;

wherein a first DC output voltage is generated from the inductor and a second DC output voltage is generated from the secondary coil.

15. (Amended) A converter according to Claim 14 further comprising a first rectifier and a second rectifier, wherein the inductor is connected between an input voltage and the switch, wherein the first rectifier is connected to the inductor to generate the first DC output voltage therefrom and wherein the second rectifier is connected to the secondary coil to generate the second DC output voltage therefrom.